



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,673	03/10/2004	Ashish M. Sukhadia	C51757 0520	4144

35395 7590 10/03/2005

WOMBLE CARLYLE SANDRIDGE & RICE, PPLC  
CHEVRON PHILLIPS CHEMICAL COMPANY LP  
P.O. BOX 7037  
ATLANTA, GA 30357-0037

EXAMINER

LEE, RIP A

ART UNIT	PAPER NUMBER
----------	--------------

1713

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/797,673

Applicant(s)

SUKHADIA ET AL.

Examiner

Rip A. Lee

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☒ Claim(s) 1-3, 7-9, 20-24, 26 and 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11-01-2004</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 38-45 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 4, 6, and 8, 18-22 of copending Application No. 10/720,024. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following.

The present claim is drawn to a composition comprising the contact product of at least one tightly-bridged metallocene, at least one organoaluminum, and at least one chemically treated solid oxide. The copending claim is drawn to a composition comprising at least one metallocene having a bridging group, an organoaluminum, and a chemically treated solid oxide. Both sets of claims recite the same organoaluminum compounds and bridged metallocenes.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

u

Art Unit: 1713

3. Claims 1, 10- 20, and 28-37 are rejected under the judicially created doctrine of double patenting over claims 1-6 of U. S. Patent No. 6,613,852 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: Both the instant application and patent contain claims drawn to processes for polymerizing ethylene and an alpha olefin in the presence of a catalyst comprising a bridged metallocene, organoaluminum and chemically treated solid oxide. Turning to the specification of the patent, one learns that the metallocene is defined as  $\text{Me}_2\text{Si}(\text{Ind})_2\text{ZrCl}_2$  (col. 9, structure 4). The property recitations are obvious over the patent since processes that are essentially the same would result in the formation of products which exhibit essentially the same properties and characteristics.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims recite a method of polymerizing olefins using a catalyst containing a “tightly bridged” metallocene. This is a relative term which renders the claim indefinite. The term is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For instance, *ansa*-1,2-ethanediyl (1,2-ethylidene) linkages, also claimed by Applicant, are hardly “tightly bridged” compared with dialkylsilylene or isopropylidene linkages.

6. Claims 10, 11, 28, 29, 38, and 39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims describe a substituent that is an “inorganic group” or an “organometallic group.” Such description encompasses an infinite combination of groups which are not defined by the claim or by the specification. As such, the subject matter of the claims is unclear.

7. Claims 19 and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. If the method further comprises use of the recited catalyst component, then the recited materials can not be “optional” components. The meaning of the claims is unclear.

### ***Claim Objections***

8. Claims 1-3, 7-9, 20-24, 26, and 27 are objected to because of the following informalities: The claims recite the terms "less than about" and "at least about." The terms are vague because it is not clear where the upper bound and lower bound of the recited ranges lie. See MPEP § 2173.05(b)(A). Appropriate corrections are required.

### ***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1713

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 1-45 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over McDaniel *et al.* (U.S. 6,833,338).

McDaniel *et al.* teaches a process for polymerizing olefins with a catalyst comprising metallocene, organoaluminum, and treated solid oxide. Representative metallocene dichlorides are shown in columns 5-9, in which said metallocenes contain sufficiently small linking groups to render the (tetrahydro)indenyl ligands tightly bridged. Organoaluminums are described in col. 9, lines 21-48. Preparation of fluorided alumina and fluorided silica-alumina is taught in columns 11 and 12. One observes that the catalyst composition of the prior art is essentially the same as that presented in the instant claims. Copolymerization of ethylene and at least one alpha olefin comonomer is discussed in col. 15, lines 39-41. Isobutane is used as diluent (col. 15, line 61). Polymers produced by the process of McDaniel *et al.* have the following properties: (i)  $M_w/M_n = 2.5-20$ , (ii)  $d = 0.90-0.97 \text{ g/cm}^3$ , (iii)  $MI = 0.01-100 \text{ g/10 min}$ , (iv)  $HLMI/MI = 10-250$  (col. 17, lines 1-18). The reference is silent with respect to properties of films prepared from such copolymerizations. However, a reasonable basis exists to believe that the resulting copolymer exhibits the claimed properties, especially in light of the fact that the process taught in McDaniel is essentially the same as that described in the instant claims and in view of the fact that the polymers also exhibit the claimed rheological properties. Since the PTO can not conduct experiments, the burden of proof is shifted to the Applicants to establish an unobviousness difference. *In re Fitzgerald*, 619 F.2d. 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112-2112.02.

Art Unit: 1713

13. Claims 1-15, 20-33, and 36-43 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over McDaniel *et al.* (U.S. 6,376,415).

McDaniel *et al.* teaches a process for polymerizing olefins with a catalyst comprising metallocene, organoaluminum, and treated solid oxide. Representative metallocene dichlorides are shown in columns 5-10, in which said metallocenes contain sufficiently small linking groups to render the (tetrahydro)indenyl ligands tightly bridged. Organoaluminums are described in col. 10, lines 19-45. One observes that the catalyst composition of the prior art is essentially the same as that presented in the instant claims. Copolymerization of ethylene and at least one alpha olefin comonomer is discussed in col. 14, lines 24-26. Isobutane is the preferred diluent (see examples). The reference is silent with respect to results from such copolymerizations. However, a reasonable basis exists to believe that the resulting copolymer exhibits the claimed properties, especially in light of the fact that the process taught in McDaniel is essentially the same as that described in the instant claims. Since the PTO can not conduct experiments, the burden of proof is shifted to the Applicants to establish an unobviousness difference. *In re Fitzgerald*, 619 F.2d. 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112-2112.02.

14. Claims 1-45 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over McDaniel *et al.* (U.S. 6,613,852).

McDaniel *et al.* teaches a process for polymerizing ethylene and at least one alpha olefin with a catalyst comprising bridged metallocene, organoaluminum, and treated solid oxide (fluorided alumina) using isobutane diluent (claims 1-6). Representative metallocene dichlorides are shown in columns 5-10, in which said metallocenes contain sufficiently small linking groups to render the (tetrahydro)indenyl ligands tightly bridged. The reference is silent with respect to properties of films prepared from such copolymerizations. However, a reasonable basis exists to believe that the resulting copolymer exhibits the claimed properties, especially in light of the fact that the process taught in McDaniel is essentially the same as that described in the instant claims. Since the PTO can not conduct experiments, the burden of proof is shifted to the Applicants to establish an unobviousness difference. *In re Fitzgerald*, 619 F.2d. 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112-2112.02.



Art Unit: 1713

***Information Disclosure Statement***

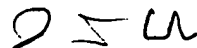
15. The information disclosure statement filed July 29, 2004 fails to comply with 37 CFR 1.98(a)(1), which requires the following: the application number of the application in which the information disclosure statement is being submitted on each page of the list. Presently, the incorrect serial number (10/979,673) appears in Applicants' IDS. Please submit a new information disclosure statement with corrected information. The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

ral

September 23, 2005



DAVID W. WU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700